Official Undergraduate News Organ of M. I. T.

Vol. XLIX-No. 86

CAMBRIDGE, MASS., MONDAY, JANUARY 20, 1930

Price Five Cents

LARGE NUMBER OF **ALUMNI PRESENT** AT ANNUAL DINNER

438 Graduates Make Dinner Most Successful of Recent Years

WALKER HALL DECORATED

Dr. Stratton and R. L. O'Brien Are Chief Speakers of The Evening

With the final strains of the Stein Song, the Technology Alumni Association closed its fifty-third annual dinner held in Walker Memorial on Saturday night, boasting one of the largest attendances of recent years. There were 438 members of the association seated in the decorated walls of the main hall as well as a number of outside guests.

Following the dinner the meeting was called to order by Paul W. Litchfield '96, president of the Alumni association who gave a brief introductory address emphasizing the need of trained engineers in the world today and the change of this country from that of one chiefly concerned with home consumption to a large exporter. Dr. Stratton acquainted the audience with the progress of the Institute during the past year. Among his statistics he stated that the total attendance at Technology on November 1st, 1929 was 3066, 581 members in the Senior Class and 693 freshmen. Contrary to the general loss of enrollment in technical schools throughout the country, his figures showed a total of 444 transfers or an increase of two per cent and a total of 445 in the graduating class or an increase of eight per cent. Of interest in the president's talk was his defense of the raise in tuition which he said had been done with a great deal of reluctance but which the increase in maintenance costs and the necessity of retaining a high quality of instructors made inevitable. He also stated that a complete survey of the freshman and Sophomore curriculum is beman and sopnomore curriculum is being planned with a view to bettering Matmen Win Over the instruction and revising the contents of the subjects to more closely coordinate them with the course which ceeding three years.

Speech on Reunion

Professor Samuel C. Prescott '94, chairman of the faculty, spoke in place Thomas C Desmond '09 concernfessor Claire E. Turner '17, of the Health, gave a short address on the need of hygenic education among the grammar school students of the country and outlined the work of the Institute along this line in cooperation with the Eastman Kodak Company. According to Professor Turner, Technology leads the world in educational film work, and he is going to Honolulu next summer to give instruction in this subject to 1,000 students. Diagrammatic motion pictures were projected on a screen showing the action of the lungs in breathing and a number of living microscopic organisms which had been magnified several thousand diameters.

O'Brien Gives Address

The chief speaker of the evening was Robert Lincoln O'Brien, author and former editor of the Boston Herald, who spoke on "What 1930 Means to Us." His main topics of address were the opportunities afforded the engineering minds in the modern civil-(Continued on Page 4)

Popularity Increases For Physical Training

During the past week Physical Training has shown very evident signs of becoming one of the most popular classes in the Institute. Not content with attending their own classes many men have gone so far as to attend the classes of other sections as much as possible. As a result classes have been greatly overcrowded recently, and at times the floor has been completely filled.

Students Named As Committee on Walker Revision

Executive Committee of Governing Body Appoints Seniors As Investigators

To cooperate with the faculty and Corporation in their plans for revising Walker, and to coordinate student ideas on the subject, a group of Seniors has been named by the Institute Committee to act as a Student Committee on the Revision of Walker Memorial. The appointment was made by the Executive Committee of the student governing body, but through error was not announced to the whole body.

The members of the special committee are: Edmund G. Blake, chairman, and Wilfred F. Howard, D. Tullis Houston and E. Ralph Rowzee. At the meeting of the student group yesterday, the men considered the various individual problems involved in any plan to change Walker Memorial. and studied the findings of the Alumni Council's committee on the revision of the building. This committee made thorough investigation of the whole problem several years ago, and their reports and charts were found to contain a wealth of pertinent information and suggestious, according to Mr. Blake.

Although no definite action can be expected for some time, the opinion of the Student Committee on the Revision of Walker Memorial is that in the new building the Main Hall be used as a lounge, and that the dining service be housed in one wing. When complete, the building would present some such appearance as was shown in the picture published on January 15th in the "Alumni Issue" of THE TECH.

While the Executive Committee felt that preliminary action on this inportant matter could best be carried on by a small group of Seniors, it was understood that there will be additions of Junior members to the committee in the spring. It is these Juniors who will carry on the work during the next year.

C.C.N.Y. 23 to 11

the student is to follow in the suc- Axford Undefeated in 115 Lb. Class-Freshmen Win at Andover

Winning the third meet of the sea ing the coming five year reunion, and son, the Wrestling team defeated the called attention to "Open House Day". C. C. N. Y. last Friday night at New which occurs on the first day of the York by the large score of 23 to 11. meeting, and the dinner on Satur- As in the former meets this season day night at which time a scientific the Engineer grapplers showed demonstration will take place along strength in the lighter classes, alwith the usual entertainment. Pro-though several members in the heavies who were defeated in the first two Department of Biology and Public meets this season won their matches against the New York team.

Axford Undefeated

Axford kept his record unmarred by defeating Lipsig in the 115 pound division by a fall after 3 minutes and 39 seconds of wrestling. Although Lipsig seemed bigger than the little Engineer grappler, he had nothing on Axford in the line of experience, and after a short period of sparring the New Yorker was pinned to the mat with a half-Nelson and crotch hold.

In the 125 pound class, Perkins, who has won one of his two matches this season, defeated Mandell, of C. C. N. Y., by a fall after 8 minutes on the mat. Perkins had the advantage over his opponent from the start, but it was not until the last few minutes that he was able to turn the New Yorker over for a fall.

Technology scored another victory in the 135 pound class when Negus, of M. I. T. threw Zalkind in 3 minutes and 50 seconds, after the grapplers had over run the sparring period of two minutes. Negus was first to get the advantage with the referee's hold and threw his man in 1 minute and 50 seconds. In the second half, he pinned his opponent again to win the

Cooper Loses Close Match

Cooper was defeated in the 145 pound division by Visato, of C. C. N. Y., by a time decision of 1 minute and 38 seconds in an evenly fought The plucky Engineer was nosed out in the final minutes after a spectacular bout in which both men came close to victory.

C. C. N. Y. scored its second vic-

RODDY, DAVIS, TRUAX, AND HUBBARD TO HEAD VOLUME L OF THE TECH

Managing Board, Volume L



RALPH H. DAVIS



GILBERT M. RODDY



EDWARD B. HUBBARD



HARMON J. TRUAX

Hockey Varsity **Defeats Huskies** 2-1 in Fast Game

Northeastern Ties Score After Lucey Tallies First Unassisted

Breaking a tie score in the second period, the Technology hockey team chalked up a 2-1 win over Northeastern U. at the Boston Arena Friday night. The final period was full of thrills when Northeastern made futile attempts to come up from behind. On two occasions the Beavers played for almost two minutes with two men in the penalty box but their strong defense held the Huskies.

The game started off slowly with neither team showing very much teamwork or pep. Northeastern clearly out-played the Engineers in the first period but found it difficult to locate the net. Technology scored first when Lucey snatched the puck, made a short dash, and slipped it by the goalie. Within a minute the score was tied after a Husky skated the length of the ice and slipped the puck into the net.

Peterson Scores

on the Beavers played a largely defensive game with occasional shots tory in the 155 pound class when often toward the end as Northeastern (Continued on Page 4) (Continued on Page 3)

Longley Chosen In Prace of Gurowich

Institute Committee Approves Sophomore Request for Representation

Following the presentation of a petition of the Sophomore Class, the Institute Committee approved John F. Longley 32 as the third Sophomore representative on the committee. This action took place after the petition had been affirmed by Thomas H. Jenkins '32 president of the class and Thomas E. Sears, Jr., '32, representative on the Institute Committee at the meeting of the committee Thursday evening in Walker Memorial.

Longley fills this position in the place of Edward J. Gurowich '32 who was banned from meetings by the Institute Committee at the last meet ing preceding the Christmas Holidays. As stated by the constitution, two consecutive absences from the meetings without sufficient excuse causes a loss of representation, and this action was felt to be necessary by the members of the Institute Committee.

In order to regain their lost representation, it was necessary that the Sonhomore Class elect another man Peterson scored the winning goal as the successor to Gurowich, and prejust before the whistle with a shot sent a petition to the Institute Comfrom in front of the net. From then mittee requesting that he be allowed to participate in the affairs of that body. Longley was chosen to fill the by Hall and Cullinan. Penalties came position left by Gurowich, and the petition was presented at the last

ANNUAL ELECTIONS BANQUET IS HELD AT COPLEY PLAZA

MacGregor Jenkins Entertains With Reminiscences and Experiences

TOASTMASTER HOUSTON

At the annual elections banquet of the Combined Boards and Staff of THE TECH, held last Saturday evening in the State Suite of the Copley Plaza, D. Tullis Houston '30, General Manager of Volume XLIX and toastmaster of the evening announced the following Managing Board for Volume L. of the paper: General Manager, Gilbert M. Roddy '31; Editor, Edward B. Hubbard '31; Managing Editor, Ralph H. Davis '31; Business Man-ager, Harmon J. Truax '31.

At the conclusion of the dinner the speaker of the evening, Mr. Mac-Gregor Jenkins, delivered a highly entertaining address, composed mainly of humorous personal reminiscences and bits of advice to the new Managing Board of the paper.

Professional entertainment followed, consisting of Sollie Gauriniello who rendered some excellent work on the piano accordion, and Wade Booth and Company, a baritone well known in vaudeville circles.

Roddy Heads New Volume

Roddy, General-Manager elect, of Bellevue, Penn., prepared for M. I. T. at the Bellevue High School, where he was active on the school newspaper and valedictorian of his class. In his freshman year at the Institute, Roddy was active in basketball and track. He is a member of the Quadrangle and Beaver Clubs, and also of Stylus. He is a member of the Executive Committee, and officiated at the Last Field Day as an Usher. His connection with THE TECH began in his iresaman year, at which time he be came a member of the Circulation Department. In his Sophomore year, Roddy transferred from the Circulation to the Advertising Department, working his way up to Advertising Manager, the position which he held on the last volume. Roddy is a member of Phi Gammaa Delta fraternity.

Hubbard Elected Editor

Editor-elect Hubbard, of Newburyport, Mass., prepared for M. I. T. at the Newburyport High School, where he was a member of the yearbook staff, and on the cast of the Senior Play. He entered the annual competition for Features Editor of THE TECH during his Sophomore year, and was elected to this position shortly afterward. Hubbard is a member of Lambda Chi Alpha fraaternity.

Davis New Managing Editor

Davis, newly elected Managing Editor comes from Wilkes-Barre, Penn. He graduated from the Plymouth High School in 1926, having been active on the school newspaper, in the senior class play, and as president of the Senior Class. He prepared for M. I. T. at Wyoming Seminary at Kingston, Penn., where he was on the board of the Annual. Davis entered Technology in 1927, and during his first year was active on the freshman track team. He has served on the (Continued or Page 4)

Senior Week Elections Scheduled for March 5

Announcement has been made by the Institute Committee that nominations for Senior Week officers will be held on Wednesday, February 26, followed by elections on Wednesday, March 5. Since no nominations were made last year at the appointed time, it is requested that nominations be sent in at the scheduled date this year in order to get the elections over with as soon as possible.

A Record of Continuous News Service For 48 Years



Official News Organ of the Undergraduates of M. I. T.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

D. T. Houston '30General Manager W. F. Howard '30Editor
C. Connable '30Managing Editor G. Smith '30Business Manager
ASSOCIATE BOARD
R. Davis '31News Editor

G. M. Roddy '31.....Advertising Manager

H. T. Truax '31 .. Business Service Mgr.

MANAGING BOARD

Walker Memorial, Cambridge, Mass. News and Editorial-Room 3, Walker, Business—Room 302, Walker, Telephone Univ. 7415 E. B. Hubbard '31......Features Editor E. S. Worden '31......Make-up Editor

Printer's Telephone-HANcock 8387 - 88 SUBSCRIPTION PRICE, \$2.50 PER YR. Published every Monday, Wednesday and Friday during the College year except during College vacations Entered as Second Class Matter at the Boston Post Office Member Eastern Intercollegiate Newspaper Association

OFFICES OF THE TECH

J. K. Minami '31.....Circulation Manager EDITORIAL DEPARTMENT BUSINESS DEPARTMENT Editorial Board L. Verveer, Jr. '30 W. B. Schneider '31 **Business Service Department** W. Holst '32 J. Valverde, Jr., R. T. Hodgdon '33 G. H. Ropes C. M. Thayer '32 NEWS AND SPORTS DEPARTMENTS Night Editors
J. W. Bahr '31 M. F. Burr '31
F. C. Fahnestock '30 E. W. Hermon 30 Assistant Circulation Managers W. M. Moore, Jr. '32 J. J. Winkler '32 E. D. McLeod '32 News Writers
A. H. Feibel '32 S. R. Fleming '32
M. S. Hathaway '32 E. P. Newman '32
O. W. Burtner '31 E. F. McLaughlin '32
G. H. Sistare, Jr. '32
Whiter SE. D. McLeod '32
Circulation Department Staff
L. Cianciolo '32
W. B. Pierce '32
S. L. Johnson '32

Photographic Staff
P. H. Bonnet '31 J. P. Elting '31 Advertising Department Assistant Advertising Managers
R. H. Haberstroh '31 W. H. Barker '32
W. B. Simonds '32 A. S. Ellis '32
M. D. Triouleyre '32 Sports Writers an '31 P. A. Robert '32 F. Coeffel 33
E. Shea '33
33 C. W. Sweetser '33
32 D. H. Clewell '33
R. J. Dunlavey '32
J. T. Groff '33
Munson '33 L. C. Bond '32 A. Jewell '32 T. E. Sears, Jr A. L. Berry '33 C. E. McCormack '32 E. F. Moran '32 32 K. G. Bell '33 M. L. Brown '33 Henshaw '33 Jr. 32

In charge of this issue:

O. C. Chapman 31

H. Kamy '31 P. E. Davis '33 W. L. Sheppard '33 J. L. Friedman '32 W. V. Skees '33

P. A. Robert '32

THE PRESIDENT SPEAKS

J. H. Coenen '33

DR. STRATTON in speaking to the Alumni Association Saturday evening stamped out two well worn rumors which had for several years furnished any Technology gathering with interesting topics for conversation. The rumors, while hardly more than suspicions, indicated that perhaps at some time in the not far distant future the Institute would develop into a graduate school, and even more potent was the rumor that very soon there was a possibility of the four year course being changed

President Stratton expressed the hope that Technology will never abandon its undergraduate department to become a graduate school. He also stated that plans are now being made for a survey of the work done in the freshman and Sophomore classes for the purpose of eliminating as far as possible, all duplication in courses to save time so that it may not be necessary to extend the undergraduate course to five years.

It is of course impossible to discontinue entirely all duplication of material covered for the obvious reason that the school years are broken up by three months of vacation. While the courses are varied, and each in itself complete, the study of one must overlap the others to secure the required continuity of ideas.

It is the opinion of many professors and graduate students at the Institute that four years is long enough to spend on undergraduate work, and that it is far better to obtain a Bachelor's degree at the end of four years and then devote a year towards a Master's degree. Feeling that the Bachelor's degree has not Sprightly revue; good dancing. the significance it had a generation ago, the exponents of this idea argue that a man setting out in the scientific world would delicate theme handled in a pleasing find good use for the study requisite for the Master's degree in manner. competing successfully with his contemporaries.

The general acceptance of such a plan has its obvious limita- operetta. tions, and students will probably continue to plunge, sometimes headlong, into the practical everyday phases of their profes- Shavian entertainment. sion. If the five year plan ever comes up for further consideration, it would be well to embody in the course as much practical experience as possible. It is in this particular that most graduates at present find themselves lacking.

"RICE CHRISTIANS"

LIKE the Chinese famine sufferers who profess Christianity in order that they may receive the rice given out by the Missions, so do men at this time of year go to any end to "live" for another term at the Institute.

During the horrible famines with which the great Empire is inflicted periodically, the poor people go to any means to get food. A favorite method for the fortunate is join the "rice man again. line" at the missions—the more fortunate are able to secure food from two or three denominations. They need little to subsist, and the meager allowances which through necessity the missions provide are sufficient to keep the people alive for a while longer. If they are lucky, they last until the food supply of the nation is again replenished.

The analogy between the famine sufferer and the student approaching examinations is startling. Men who are harassed by mental famine are willing to grasp at any method for providing educational nourishment. Long hours of study occupy the University of Texas have been put on nights. Tutoring occupies the days. Frantic searching of the a four year probationary period. Rush "files" is resorted to. The Cooperative Store reports that it work is practically abolished, and sesells almost as many text-books during the last two or three weeks of term as it does at the beginning. The students go to the professors, asking consideration and attempting to clear up important matters. A frenzy of somewhat hopeless activity so must approve prospective members characterizes the period. Everyone is making a tardy attempt before initiation. After the four year to "get through".

Far be it from us to censure procrastination at this late day. While more study during the term would no doubt have relieved the situation, any methods are warranted at present. any time low scholarship will exclude Work hard, and more luck to you!

We would, however, continue the analogy to that heartless anticlimax. Some of the Chinese find futile their efforts to procure food, and fall by the wayside. Their loss is bemoaned; but the many who are left when the new season comes around read rapidly retain more than those carry on the work just the same.

THE EDITORIAL SPECULUM

It is the opinion of the Spectator that the campaign for the abatement of noise which is now being waged in New York and other large cities might well be employed here at home. He has in mind, in particular, the racket made by the numerous bridge enthusiasts who infest the East Lounge of Walker, and who are wont, on a quiet afternoon, to shatter the peaceful meditations of the chess players by their raucous cries of "two no trump," "Bye," and "Here's what you should done!" Yea, the more he deliberates on the subject, the more he is inclined to admit that R. E. Rogers, P. T. Barnum, and a few more "were right after all."

The annoyance caused by the players referred to above might have gone unnoticed, were it not for the fact that they often engage in competition, unconsciously but none the less effectively, with some student who is industriously occupied in pounding out some really good music from the well known piano. It is the earnest hope of the Spectator that someone will uncover the talents of the boys who daily amuse themselves by playing such pieces as "March of the Dwarfs," 'Rustle of Spring," and the "Second Hungarian Rhapsody" of Liszt. They should be encouraged. There are few enough artists on the register of an educational institution such as Technology. And there is little enough good entertainment around the place that many of us call "home."

To one not inured to such things by their constant repetition, a change such as is now taking place in the management of THE TECH is always the cause of a certain feeling of re-To one who has taken an active interest in an activity, the passing of an old and familiar regime and the advent of a new management is usually accompanied by a sense of strangeness and unfamiliarity; a feeling similar to that we experience when leaving home, or when graduating from college. Such a feeling was that stirred in the Spectator at the banquet Saturday evening when the managing board of Volume XLIX took official leave of the paper. Shortly it will wear off. THE TECH will

Play Directory

Stage

COPLEY: "The Middle Watch". Good farce comedy and well worth

"Pleasure PLYMOUTH: "Little Accident". A

MAJESTIC: "The Fortune Teller."

COLONIAL: "Simple Simon". With Ed Wynn. Sure to be good.

MODERN and BEACON: "Party Girl". Marie Prevost and Douglas

Fairbanks Jr. KEITH'S: "Hot for Paris". Fun and pretty girls.

KEITH-ALBEE: "Romance of the Rio Grande". With Warner Baxter. METROFOLITAN: "General Crack" A veteran actor in a good plot.

OLYMPIA and UPTOWN: "The Love Parade". The delightful French-

FENWAY: "The Painted Angel". A Fanny Hurst story of night club

LOEW'S STATE: "Their Own Desire". With Norma Shearer. Tame story with suspicious title.

LOEW'S ORPHEUM: "Condemned". With Ronald Colman. An unusually good picture.

Fraternities and sororities at the cret fraternities are read of existence in the extensive code of rules laid down by the board of regents of that institution. The faculty committee alperiod the committee will report on the advisability of doing away with fraternities and sororities altogether. The new rules also provide that at a fraternity from the Texas campus.

Dr. C. B. Allen of the University of North Dokota in recent talk to freshmen said, "Don't spend long hours who read slowly.'

Temperature of 6500 Degrees F. Developed in Carbon Arc Furnace

Professor Wilkes of Physics | This, of course, is far greater than Department Describes New Process

Two carbons came closer together in the center of the vivid furnace. With a piece of smoked glass before his eyes, Professor Gordon B. Wilkes 11, of the Physics Department looked into the furnace at the white hot mass in this metal stew-kettle. faint smile, he turned from his inspection of the glowing liquid and said, "There is the hottest place in the city of Boston." On the most torrid day of summer when the breath giving east-wind fails to respond to its cue. the maximum temperature reached in Boston is generally not greater than a mere one hundred degrees Fahrenheit. The temperature in the furnace which Professor Wilkes was operating was over six thousand degrees Fahren-When the current had been turned off at a large switch board in the laboratory, Professor Wilkes seated himself at his desk in his office, an office very interesting to anyone desiring information on the application of electrical heating methods and furnace design from either a commercial or research standpoint.

Arc Lights are Hottest

Professor Wilkes continued, "I said a moment ago that you were looking at the hottest place in the neighborhood of Greater Boston. Perhaps I should have said that you were looking at the point that has the same amount of heat as a number of other places. all of which are the real 'hot spots." You see the hottest place anywhere cround here is the crater of a carbon nd therefore any old-time are light has the distinction of being one of the hottest places in this locality. The ends of the carbons in one of these lights has a temperature the equal of any temperature we can reach in the furnace over here. Of course we have ideal conditions that give us a little higher temperature than the lights which are out where the elements can affect them, but on the whole, the street are lights are the hottest places in the city.

"You must realize of course, that the 6500 degrees I told you about is obtainable just at the point of the carbons. There is a slight variation in the space between the two electrodes and this high point might not

be reached.

Iron Smelters Reach 1450 Degrees "Compare the carbon arcs to the process of casting malleable iron in any of the plants in and around Bos-There isn't a local smelter that will go over 1450 degrees in this type of pouring. You'll grant that there is some difference in that temperature and the heights we reach here.

"At the local industrial plants where they anneal steel the high point reached in their process is 1697 degrees and the low point is in the neighhorhood of 1526 degrees. In other words, the lamp on the corner of your street registers a higher number of degrees than the inside of the melting

"When they make an aluminum casting at one of the local plants they never go above 1400 degrees Fahrenheit. We sometimes have students who are melting this metal leave their crucibles for a short time and they find their work going up in smoke.

False Teeth Are Highly Heated

"Another interesting process where excessive heat is used is in the making of porcelain teeth. In order to fuse the porcelain to make the jackets for artificial teeth great heat must be reached. The manufacturing dentists find this easy in their small stoves, but they never go over 2700 degrees.

"You hear a great deal about the very high temperatures reached in the kilns in which tiles and bricks are baked. In fact, many people have the idea that these kilns are about the hottest places man works around. They are totally wrong, however, as the average commercial tile is baked and thoroughly dried out at about 1600 degrees. Industrial alloys don't take very much heat to make them dance around in the melting pot. Take brass as a practical example; a mere 2000 degrees are needed before it is ready to pour as easily as water. All other alloys 'run' at about the same point. In fact, from the technical side the melting of these compounds is not a matter of high pressure but a simple heat process.

Would Melt Brick

"People feel sorry for the men who work in the stereotyping rooms of newspapers because of the heat. They never stop to think that the lead from which type is made, being mixed with antimony and tin, has to hit 1250 before it is ready to pour. Most people consider lead as a metal that runs off the crucibles at a very low point. The 'dosses' of lead for newspaper use, put on the arc, would disappear in less time than it takes to tell it.

"Let me bring the intense heat of the electric arc home to you in a different way. Common fire brick melts in a temperature of 3100 degrees.

any temperature needed in any industrial plant in the vicinity of Boston, yet we make the material boil Other grades of brick like water. such as bauxite brick, which boils at 3425 degrees, and silica, which withstands 3000 degrees, as well as chromite which blocks the path of fire at 3720, all melt and pour off after a few minutes in contact with the arc. Even magnesia brick will give up when the electrodes pass the 4950 degree mark.

Steel Tempered at 770 Degrees

"When you stop to consider that these bricks are supposed to be the surest protection against fire that man has invented you may realize the power of the common arc lamp. Steel is tempered at 770 degrees and then is plunged into water to make it hard and brittle. Think how much more heat there is at the tip of a carbon in an arc-light than in a tempering oven.

"In the laboratory we reach high points in the making of artificial diamonds and the carbon gets up to 2700 degrees. The jewelry trade uses high temperatures a great deal, particularly to melt platinum, which, incidentally, has a very high melting point. Off hand, I should say that this metal began to seethe at a temperature of 4000 degrees while gold is bubbling up and down in its crucible at about 2000 degrees, a mere nothing when you think of our arc. Silver, the other stock in trade of the jeweler, is ready to be poured at a temperature of 3400.

Copper is Safe

"Boilers can well be made out of copper, for that material withstands heat up to the 5000 degree mark and its average duty doesn't heat it up that much. Copper coils and similar articles will continue to hold their position despite the high temperatures I have mentioned. Copper is ideal for the work, since it holds its shape under high temperatures.

"The local paint manufacturers who think their cobalt vats are at a high peak when they reach 2500 degrees ought to see their material under the arc—it heats and then disappears. Similarly the dye house men and the soap manufacturers would be very much surprised if they should see the readings of our optical pentameter at

the carbons in the arcs.

"There is another method by which very high temperatures are reached and this is with the oxy-hydrogen torch, the flame of which gets to be abut 4000 degrees. The oxy-acelytene torch flame is a little hotter as it is 5400. This intense local heat is generated in the torch, which has a handle, two needle valves, one tube connected to the first valve for oxygen and one to the other for acelytene. The latter is introduced at a lower temperature than the oxygen, a regulator fixing the pressure. The gases mix at the head of the torch, the oxygen flows in longitudinally and the acelytene meets it as it comes in through the holes in the side. The diameter of the holes and the pressure we apply determine the quality of the heat mixture.



Social hurdles are taken with ease in our evening clothes-ease on your eyes, ease on your body, ease on your pocketbook.

Hand tailored in strictly modish styles, of strictly allwool fabrics.

Tuxedoes for general evening events-coat and trousers-from \$50.

For strict formality, full dress suits, from \$60. All coats silk-lined.

ROGERS PEET COMPANY

formerly Macullar Parker Company Tremont Street at Bromfield

RELAY TEAMS OPEN SEASON AT PROUT MEMORIAL GAMES

High Jumpers Have Competed in One Extra-Mural Meet This Season

FRESHMAN TO PASS BATON nology endeavored to prevent a score.

Members of the Varsity track squad will meet their next extra-mural competition at the Willam Prout Memorial games, held under the auspices of the Knights of Columbus at the Boston Garden. Prizes for first, second, and third places will be given in all open races to be held in the meet on January 25. Technology will be represented in the one and two-mile Varsity relay races, the one-mile freshman relay, 600-yard handicap run, 34-mile handicap run, high jump, and 300-yard New England Championship

Two-Mile Relay Race

Harvard, Holy Cross, and Boston College will oppose the Varsity twomile team to be picked from among the following men: Gilman, Leadbetter, Baltzer, Allbright, Thorsen, Herbert, Berry, Brown, Wadsworth, and Mulliken. The first seven of these men are all veterans of one or more seasons as cross country runners and should be well able to run the halfmile required of them in fast time. These men have all been practicing on the board track since the first practice in the early part of December, and have turned in exceptionally good records for the half-mile in the time scrimmage neither team being able a national professional champion as

Mile Relay Candidates

Hall, Jewett, Mulliken, Lappin, Ladd, Reynolds. Wadsworth, Berry, dashes but were unable to locate the and Brown are the candidates from net. Hall cleverly intercepted quite a which the one-mile Varsity relay team few passes and broke up attempts to will be picked. The opponents for score. After thirteen minutes of play this team have not yet been chosen Lucey tallied the first goal unassisted. but it is likely that the team will be In retaliation Kerins of Northeastern opposed by the one-mile team from evened the count immediately after-Fordham University.

Freshman teams from Boston Col- kies shooting rather freely. lege and Boston University will oppose the Engineer yearling team when it starts its season at the K. of C. ahead. Hall started off by carrying neighboring colleges will be picked lost it. Several minutes of scrimmage from among Putnam, McKay, Soisalo, followed with increasing speed. Pe-Holt, Walsh, Wall, Larribee, Hayden, terson went to the penalty box for and Hammond.

Many Entries in 600

In the 600-yard handicap run the Engineers have their longest list of These include Mulliken. Lappin, Wood, Wadsworth, Herbert, missing several times by a small McKay, Medrano, Brown, Steverman, margin. Walsh, Holt, Seaver, Burroughs, and often and after a time Cullinan came Hammond. All of these men will back accompanied by Ford and Reprobably not run in this event, as the gan. Several penalties were handed dates for the relay teams and they in the box at the same time. will not compete in both races.

Berry, Leadbetter, Baltzer, Allbright, Gilman, Masters, Burdick, Moran, parently was assured of an easy goal Thorsen, and Conant are the Engin-but unfortunately the shot was wild. eers whose names are entered for the Once again after thirteen minutes 34-mile handicap run. As is true of Technology scored when Peterson shot tne 600-yard run, all these men will one not compete in the race due to the fact that a number of them are out for the relay teams and have a good chance of making one of them.

Stars in High Jump

Technology will be represented in the high jump by Coon, Sullivan, Zigler, Benjamin, and Pierce. Last Sat-urday night Sullivan took third place in the high jump at the Boston Y. M. Peterson was boardchecked bringing C. A. handicap meet. Benjamin and it back, but Hall recovered and Zigler are both veterans of several flipped it at the net ineffectively. years' experience in intercollegiate competition in track and should show up well in their second appearance in the Prout games.

Five men will try for first place honors in the New England 300-yard championship run for the Cardinal and Grey. They are Soisalo, Wall, Lappin, Hall, and Hughes. These men have all been turning in excellent times for this distance in the handicap meets held previously this

Dr. C. W. Thornthwaite, assistant professor of geography, has written a book in scroll form. It gives a list of 43,000 names and locations of cities on the goal but lacked an opening. and geographical places of interest to accompany a recently invented index and Northeastern began her last rally. globe for geographical students. The The defense held firmly though and scroll is mounted on reels inside the globe so that it may be rolled and unrolled in somewhat the same manner as a typewriting ribbon. Two windows covered with heavy magnifying lenses to be cut in the globe, one in the Atlantic Ocean and the other directly opposite in the Pacific ocean, will enable one to read the name and location of the place on one side of the scroll and the description of the place on the other.

Prof. J. C. Warden of Columbia University has declared that the alley cat is the smartest of all cats, just because he or she develops a high the beginning of the second term the degree of intelligence in the battle for team will start a series of games on

Fighting Hockey Team Gains 2-1

Game Starts Out Slowly But Ends Up in Series of Fast Rallies

(Continued from Page 1) desperate rallies and Tech-

The Engineer offense was very weak. Either the majority of shots were intercepted or, when an opportunity was available for shooting, the nuck would float up to the goalie who turned it away with ease. Hall was the outstanding player and carried the puck up the ice frequently. His defensive work was equally good.

Playing Is Defensive

On the defense Hazeltine and Peterson were effective in the pinches but had lax moments, giving Riley a chance to ward off the Northeastern thrusts. Similarly, the Husky defense snared the puck seemingly at will but gained little by it.

In the second period Captain Cullinan was board-checked with such force that he had to leave the game. Shortly after, however, he returned when Northeastern threatened. He played his usual steady game and was always a menace near the goal.

The first period started off slowly with Riley stopping an easy shot and with much scrimmaging in front of the goal. Peterson took a shot and missed, followed by a succession of alternate shots by both teams. Then came a period of wild passes and to penetrate the other.

Both Teams Score

Lucey and Ford made some nice ward. The period ended with the Hus-

The second period was considerably faster as each team strove to forge The team to oppose these the puck close to the goal where he tripping and soon after Cullinan retired after being severely checked.

Numerous Penalties

Hall continued his shower of shots The puck changed hands list contains a number of the candi- out and at one time three men were

Near the end of the period Cullinan skated the length of the ice and ap-

Huskies take Chances

Northeastern seemed determined to score again in the last period and took quite a few chances. The period started with some fast scrimmage during which Cullinan shot several times. Northeastern followed by shooting a long hopeful shot that went astray.

Regan joined Peterson in the Penalty box when he hooked a Husky trying hard to stop him. This was all Notheastern needed to start a rally but they were turned back without a score. Emery also took a seat in the box for charging, leaving only nine men on the ice. Cullinan and Hall tried hard to increase the lead but lost the puck after a pile-up in front of the goal.

Hail of Shots

Taking the puck again Hall went through the Husky defense like a shot but was going so fast he was unable to retain the puck and shoot. Cullinan, Hall, and Marvin rained shots Cullinan went out for leg-checking Riley made several pretty stops.

The lineup: Cullinan and Marvin right wings, Hall and Ford centers, Lucey and Regan left wings, Hazeltine right defense, Peterson left defense, and Riley goal.

Bowdoin was defeated by Boston U. 5-1 in the other game making up the double-header. A period of one game would be played then the other teams would take the ice for a period. Before the game and between periods music was furnished by the B. U.

The game was the last this term on Technology's schedule and after the road.

O'BRIEN ADDRESSES THE CATHOLIC CLUB

Win Over Huskies Speaker is Director of Public Utilities in Bay State

> Mr. William H. O'Brien, Director of Public Utilities of the Commonwealth of Massachusetts, stressed the necessity of severing our political relations with the Old World, at a smoker of the Technology Catholic Club, held last Monday evening, in the North Hall of Walker Memorial.

> The speaker, who has spent four years abroad studying telegraph and elephone service, and guest of Owen D. Young at the Geneva peace conference in 1925, also expressed his belief that as long as so-called "trained diplomats" continue to conwe would continue to have war and that only after people insist upon delegating commonsense business men to foreign governments would we begin to make any steps towards world

After Mr. O'Brien's talk refreshments were served to the 100 men present.

Squash Offered To Freshmen as P.T. Substitute

Free Coaching Available Under National Professional Champion

Freshmen interested in squash may take advantage of free coaching under well as substituting it for P. T. next term. The squad will be picked from those showing the most ability but since there are only a few that have any experience in the game, practically everyone will have an equal

Squash is a comparatively nev port but because it can be continued after college many college men are taking it up. Some idea of its popularity at Technology may be gained from the fact that there are at least PROF. SHAPLEY WILL fifty members of the faculty actively engaged in it.

Harvard has taken it up with such enthusiasm that courts are available for only a half an how at a time and are signed up for several days ahead. Other colleges and athletic clubs have taken it up with equal interest.

Jack Summers, the new coach will do much in starting the novices off for life in the Universe." right and will give many pointers to those already playing the game. All those wishing to substitute the new sport must sign up before Jan. 22 at 12 o'clock.

Varsity Boxers Win One Bout in West Point Meet

Orleman Scores Knockout in Light Class as Team Loses 6 to 1

On their first trip of the season the Engineer boxing team met plenty of competition at the hands of the Cadets in the meet on Saturday. The Army showed great strength in all classes and allowed the Engineers only one

In the 115-pound class Orleman won a decisive bout over Davis of the Army, After being knocked down duct international affairs in Europe early in the opening round, he came back with a strong attack and forced his opponent to take the defensive. In the second round he knocked Davis down twice for the count of nine, the bell saving a knockout the second time. In the third and final round Orleman set out to finish things as quickly as possible. The referee spared Davis from further damage by stopping the bout, giving Orleman credit for a knockout.

McKenna And Bolanos Lose

In the 125 and 135-pound classes the Cadets won decisions after three fast rounds of boxing. McKenna represented the Engineers in the first class and Bolanos in the latter. Kalman, in the 145-pound class, and Barker, in the 155, were both knocked out. Bell of the Army floored Kalman after 1 minute, 40 seconds of boxing in the third round, while Roller put Barker out early in the second. Cooper lost the 165-pound bout by forfeit.

In one of the closest bouts of the evening Tupper lost a fast, hard-hic ting contest in the 175-pound class by a decision. King, the Engineer's opponent, was an aggressive boxer and forced Tupper to hit a rapid pace.

This was the opening meet for the Varsity boxers, and their performance gives promise of better work as the season progresses. The next meet will be after the vacation, with the Navy on February S.

SPEAK NEXT SUNDAY

Harlow Shapley, professor of As tronomy at Harvard University and director of the Harvard Observatory, will speak at the Community Church. Symphony Hall, next Sunday morning on the subject of "The Chance

The service, which will be con ducted by Professor Clarence R Skinner, will begin at 10:45, and will be preceded by a violin and organ

MERMEN LOSE TO NEW YORK U. AND COLUMBIA TEAMS

Technology Swimmers Meet Jinx on First Trip-Losing 45-31 and 34-28

RELAY TEAM VICTORIOUS

On their week-end trip to New York the Technology Varsity swimming team took part in two meets. On Friday evening they met New York U. and came out on the short end of a 45-31 score. At Columbia on the following evening they lost a good contest to the strong Columbia natators by the closer score of 34 to 28.

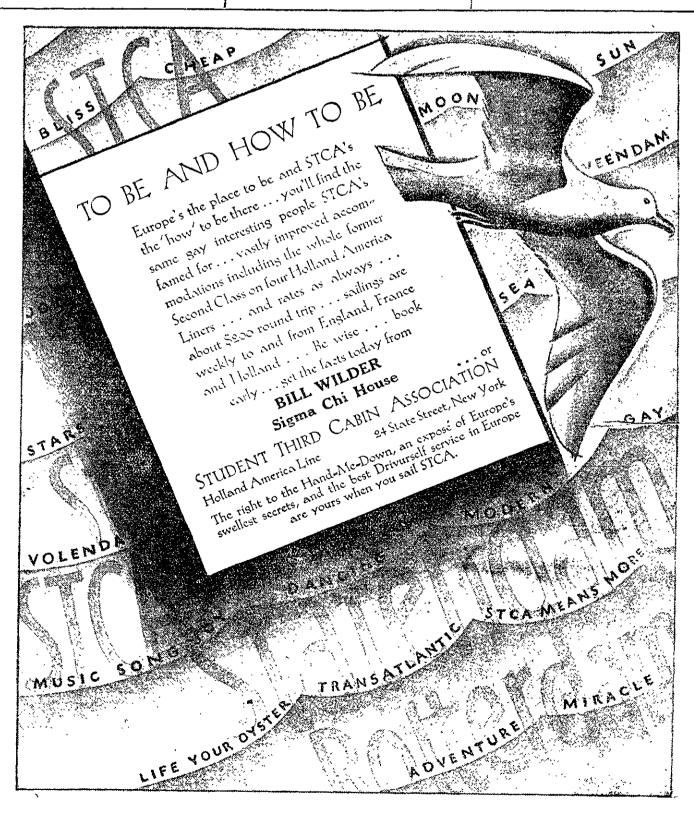
Birnbaum performed well for the Engineers in both meets in the breast stroke, winning this event in the N. Y. U. contest and tying for second at Columbia. Appleton took second in the N. Y. U. encounter and tied with Birnbaum on Saturday. Torchio did good work in the 100-yard free-style in both meets.

The 200-yard relay team, composed of Lutz, Teague, Baker, and Torchio, took the Columbia event in the time of 1:45 3/5. In spite of the fact that the opposing teams won a large majority of the first places, the Engineers pushed them hard in nearly very event, winning a large number of seconds and thirds. This accounts for the fact that the scores were far from one-sided.

FENCERS DEFEATED BY BOSTON COLLEGE

In their opening meet of the scason, the Technology fencing team lost to the Boston College squad by the decisive score of 14 to 3. The meet was held on Saturday evening in Walker gym. Captain Steele of B. C. was the star performer of the evening, winning seven points for the Eagle team. For the Engineers Captain Deake won from Langan in the feils 5-3 and lost to Steele 2-5. In the epee he lost to Steele 0-1, and in the sabre lost again to Steele 1-5. Fragiacomo lost to Steele in the foils 3-5 and won from Langan 5-3. In the sabre he lost to Steele and Langan 5-3 and 5-1.

As a general rule girls surpass boys in securing good grades in college, says Prof. P. L. Palmer of the University of Chattanooga. However, their superiority in this way is not caused by the fact that they are smarter, but they study harder, he



NOTICES - ANNOUNCEMENTS INITIATIONS HELD

Of General Interest

Faculty Club Luncheon Meeting Mr. Henry E. Warren Tuesday, January 21, 12 M., Walker Memorial, Faculty Dining Room

Mr. Warren, President of The Warren Telechron Company of Ashland, Mass., will be the speaker at the Faculty Club Luncheon Meeting. subject of his talk will be "The Manufacture of Telechron Clocks."

CALENDAR

Monday, January 20

7:30-Chemical Society Smoker, North Hall, Walker Memorial

Tuesday, January 21

5:00—M. I. T. A. A. Meeting, North Hall, Walker Memorial 6:00—Alpha Chi Epsilon Dinner Meeting, Faculty Dining Room, Walker Memorial

Wednesday, January 22

7:00-Tech Show Rehearsal, Walker Gym

Thursday, January 23

7:30-Meeting of Tech Show Cast, West Lounge, Walker Memorial.

UNDERGRADUATE

Freshmen wishing to substitute Crew for P.T., during the second term, for P.T. during the second term must should sign up in Mr. McCarthy's sign up in Henry P. McCarthy's office office before noon on Wednesday, in Walker Memorial before January January 22nd.

P. T. CUTS

As the last class in Physical Training for this term will be on Wednesday at eleven o'clock, all men who up before that time.

INTERCOLLEGIATE BALL

Persons who are planning to attend the annual Intercollegiate Ball to be held at the Copley Plaza Hotel on February 14th are reminded that they may secure tickets from Harmon J. Truax at THE TECH business office, and from the cashier in charge of the recreation halls at Walker Memorial basement.

FOUND IN ARMORY

The caretaker of the Armory has found a grey overcoat, made in Lancaster, Pennsylvania, which was left January 22. Substitutions may be here by some freshman at drill recent-

FRESHMAN TRACK

All men wishing to substitute track 22 at noon.

TECH SHOW

There will be a meeting of all men who are interested in painting scenery in the Show Office on the third floor of have cuts are urged to make them Walker Memorial today at five o'clock.

COLLEGE TRANSFERS

All College Transfers who are planning to take the special examination in history scheduled for 1:30 P. M., Friday, January 31, but who would prefer to take it at 1:30 P. M., Tuesday, January 28, are requested to sign the petition in front of the Information Office immediately.

FRESHMAN GYM

All men planning to substitute gym for P.T. during the second term must sign up for this sport before noon, made in Henry P. McCarthy's office in Walker Memorial.

ANNUAL ELECTIONS AND BANQUET HELD

resuman and Sophomore dance committees, on the All-Technology Smoker Committee in 1929, and on the Field Day Committee in 1929. He is secretary of the Junior Class at present. Davis is a member of Stylus, the Beaver Club, and the Quadrangle Club,

Truax Business Maanager

Truax, newly-elected Business Manager, of Velva. North Dakota, prepared for M. I. T. at the Shattuck School, Faribault, Minn., where he was Busi ness Manager of the school weekly and a member of the yearbook staff. At the Institute, Truax has been active in the Chemical Society and is a member of Stylus. He came out for the Advertising Department of THE TECH in his freshman year, continuing with this department until he was elected Business Service Manager, which position he has held during the last year. Truax is a member of Theta Delta Chi graternity.

Associate Board Announced

Announcements of the Associate Board of Volume L were as follows: News Editor, Stuart R. Fleming '32; Sports Editor, Paul A. Robert '32; Make-up Editor, Eric P. Newman '32; Advertising Manager, William H. Barker '32; Business Service Manager, Charles M. Thayer '32; Circulation Manager, Joseph J. Winkler '32.

TELECHRON CLOCKS TOPIC AT LUNCHEON

"The Manufacture of Telechron will be the subject of dis-Clocks" of the Faculty Club, to be held to-Room of Walker Memorial.

The speaker, Mr. Henry E. Warren '94, is a graduate of Course VI at the Institute, and is President of the Warren Telechron Co. of Ashland,

Mr. Warren recently gave one of the clocks manufactured by his company to the Faculty Club, and it has been placed in the Faculty Dining Room.

Women now have the right to use the club and lounge cars on Central purposes as well as men.

438 ALUMNI ATTEND 53RD ANNUAL DINNER

Beaver Club, and the Quadrangle the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute futility of applying for a position Club, and is a member of Phi Kappa O'Brien jestingly remarked of the insignment of the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute futility of applying for a position over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections. Mr. decision over Cooper, M. I. T., I minute and edge of the subject at which they expect the coming senatorial elections are considered. tured to say that Professor Rogers over Mendell, C. C. N. Y., 2 minutes and whole a great many who graduated from before laws. before long.

> Judging from the attention given every speaker and the laughter which followed some of their remarks, the meeting was a pronounced success. Several allusions in addition to the one mentioned were made to Professor Rogers' "snob" and were all very well received. The beauty of the dining hall was greatly enhanced by the candles which furnished most of the light for the occasion. A five piece orchestra furnished music during the orchestra furnished music during the dinner from the west balcony. The speaker's table was located at a slight elevation along the east colonnade. One of the novel features of the dinner was the ice dessert which had been frozen in the shape of different fruits and flowers.

LECTURE DESCRIBES NEW LUMBER METHODS

W. F. Shaw Tells of Application to Construction Work

Modern lumber and its application to construction work was the theme cussion at the next luncheon meeting of the lecture on the "Correct Uses of Lumber in Construction" given last morrow noon in the Faculty Dining Friday afternoon by William F. Shaw in Huntington Hall, Rogers Building. of the National Lumber Manufacturers Association.

> and grading of lumber, emphasizing and St. Augustine, Bishop of Hippo now used by lumber manufacturers. He also stressed the work being done Augustine's death, August 28, 430 A. D. by various testing laboratories to de termine the strength and structural value of various types of wood.

In an under water swimming event in a recent local meet at the Univers- thesis for this lecture will be "T.V. Vermont Railway trains for smoking ity of Illinois the winner swam 165 Soong and the Spirit of Modern Capitfeet under water.

SATURDAY EVENING

Dinner Meeting of Quadrangle Club is at Durgin Park

Thirteen new candidates of the Quadrangle Club were initiated into the club Saturday evening in a meeting at Durgin Park. At 5:30 o'clock the initiations began and lasted until 7:00 There were seven of the candidates absent from the meeting since some and some had other engagements. These men will be given their initiations in the near future.

evening was Professor H. G. Pearson there are approximately eleven hunof the English department and the He is the faculty member of the club of the opportunities afforded by this subject of his talk was "Friendship." and cited some of the friendships he free evening school. had made while a member of the organization, and also the opportunities of the members of the club to form close friendships.

The meeting was presided over by Robert Butler '32, president of the Quadrangle Club. The next regular meeting will be held the second Tuesday of next term.

ENGINEER MATMEN WIN C. C. N. Y. MEET 23-11

Freshmen Team Wins at Andover by Score of 14 to 13

(Continued from page 1) Barish threw Vassolotti of M. I. T. in and body hold. Barish, who was more experienced, scored an easy victory

Stone Takes Time Advantage Captain Stone did not make such a

good showing in the 165 pound class. although he scored a time decision over his opponent of 2 minutes and 45 seconds. Stone, who had the advantage of weight and experience over to end the match.

Ward Wins 175

Ward scored his first victory in the 175 pound class by a fall from Cohen, of C. C. N. Y., after both men were forced to the mat for over running the 2 minute sparring period. Rabinow lost a one sided match to Heistein in the unlimited class by a 4 minute time advantage. The C. C. N. Y. grappler out wrestled the Engineer but was unable to handle his heavy opponent sufficiently to pin him to the mat.

The summary of the meets are as

seconds. 175 pound class—Ward, M. I. T. threw ohen, C. C. N. Y., 3 minutes.

Freshmen

minutes 53 seconds.

155 pound class—Penning, M. I. T., decision over Brown, Andover. Time advantage 4 minutes 37 seconds.

165 pound class—Townend, Andover, threw Ford, M. I. T. Time 2 minutes 1 second in overtime.

175 pound class—Barrows, M. I. T. threw Strauss, Andover. Time, 5 minutes 26 sec.

LOWELL INSTITUTE PRESENTS LECTURES

George La Piana Will Discuss The Future of the World

"The World and Its History" will be the topic presented by George La Piana, Professor of Church History, Harvard University. It will cover the past, present and future in the City of God of St. Augustine. This lecture will be given to-night at eight o'clock This is the fifth of the series of lectures presented by George La Piana In the lecture, Mr. Shaw told of on the main theme of Christianity at ecent developments in the selecting the Beginning of the Fifth Century, chiefly the scientific methods that are These lectures are given to commemorate the fifteenth centennial of St.

Arthur Norman Holcombe, Ph.D. Professor of Government, Harvard University will deliver the fifth of his series of talks on the Spirit of the Chinese Revolution to-morrow.

Lowell Institute School Surpasses All Expectations

Increase in Enrollment and Addition of Several **Courses Noted**

During the twenty-seven years of its existence the Lowell Institute were attending the TECH banquet School, has far surpassed the greatest hopes of its founders. Starting in 1903 with an enrollment of thirty Dinner followed the completion of people, the enrollment has rapidly in-the initiations. The speaker of the creased so that at the present time dred men who are taking advantages

Founded in 1903

The Lowell Institute School, an evening school for young men, which is held under the auspices of the Massachusetts Institute of Technology was made possible through a fund bequeathed by Mr. John Knowles Jr., the grandfather of President Lowell of Harvard, who is the sole trustee of the fund. The purpose of the fund was to provide a free evening school for the men who desired to carry further their study in some particular line, or for those who desired to specialize in some subject which they could not otherwise find time or money to realize. The instruction consists of three

courses-Mechanical, Electrical, and 1 minute and 45 seconds with a crotch Building Construction Engineering, each extending over two years, and designed to bring the systematic study over his opponent although Vassolotti of applied science within the reach put up a hard fight before the New of young men who are following in-Yorker was able to turn him over for dustrial pursuits and desire to fit themselves for higher positions, but are unable to attend courses during the day. It is aimed to adapt the courses to the men for whom the instruction is intended and to include the study of those principles with which they are not likely to become familiar in practice, and which will his man, was expected to score an give them a fundamental training in easy fall, but was not able to hold those matters that will be of the the New Yorker's shoulders to the mat greatest value to them in the work in which they are engaged.

During the past year it was found necessary to give advanced courses in order to accommodate the many graduates of universities from all over the country, as well as graduates from other courses offered by the Lowell Institute Itself. The following courses which were added during the past year increased the enrollment of the school from 900 to 1100: Telephone Alignment Charts. Transmission, Reinforced Concrete Design, Advanced Testing Materials Laboratory, Advanced Machine Design, Power Plant Design, Advanced Dynamo Machinery Laboratory, Heat Treatment, and Industrial Management. All these cour ses are of either six months or one year duration.

Includes Many Graduates

More and more, people today realize the value and necessity of an ad-They realize the vancea equeation. up jobs in distant cities to come to Cohen, C. C. N. Y., 3 minutes. up jobs in distant cities to come to Unlimited Class—Heistein, C. C. N. Y. the Institute for advanced training, decision over Rabinow, M. I. T., 4 min- and then take up a position with the and then take up a position with the leading companies of the East. The average age of the people is twenty six, but there are some much older, and some much younger. It is not unusual to see in the same class a father and son-the one having secured an education, and realizing the urgent necessity of a more advanced learning, and the other having had only a grammar or high school educa-

SIMPLEX WIRES and CABLES

INSULATED WITH RUBBER PAPER OR VARNISHED CAMBRIC

SIMPLEX WIRE & CABLE @

Manufacturers 201 DEVONSHIRE ST., BOSTON

BRANCH OFFICES CHICAGO SAN FRANCISCO NEW YORK CLEVELAND **JACKSONVILLE**

tion, and also realizing the need of a

better education.

The Lowell Institute School does not give a degree, but it does give a diploma to its graduates. This diploma has enabled scores of men to obtain positions which compare favorably with positions which graduates of any college have obtained.

SELECTED GRADES

Anthracite and **Bituminous**

COAL

BURTON-FURBER COAL COMPANY

50 Congress St.

Walton Lunch Co.

420 Tremont Street

629 Washington Street 30 Haymarket Square

Pearl Street Tremont Street

1083 Washington Street

44 Scollay Square

332 Massachusetts Avenue

19 School Street 437 Boylston Street

1080 Boylston Street

34 Bromfield Street

540 Commonwealth Avenue 204 Dartmouth Street

Allston

1215 Commonwealth Avenue

Cambridge 78 Massachusetts Avenue



· · They shall mot have our Pipes!

PIPES and pants are mascu-line prerogatives that defend themselves and us. Where else could men find sanctuary?

Pipes, stout pipes, and packings of good old Edgeworth-what perfect expression of man's inviolable right of refuge with other men behind barriers of redolent smokel

Tobacco with the whiskers on, that's what man wants-good old seasoned pipe-tobacco, the best of the leaf, all blended and flavored and mellowed . . . Edgeworth, in short.

You don't know Edgeworth? Then no time must be lost. Buy Edgeworth or borrow it, or let us send you some. There below is even a coupon, a free ticket for your first few pipefuls of the genuine. Send us the coupon

> and we'll send you the Edgeworth.

Edgeworth is a careful blend of good tobaccos—selected especially for pipe-smoking. Its quality and flavor neverchange. Buy Edgeworth anywhere—"Ready Rubbed" and "Plug Slice"—15e pocket package to pound humidor tin.

Edgeworth

SMOKING TOBACCO

LARUS & BRO. CO. 100 S. 22d St., Richmond, Va. I'll try your Edgeworth. And I'll try it in a good pipe.

Street_

Town and State_ Now let the Edgeworth come! V